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10/570,152

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Kouji Hoshi

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EXAMINER

CHARIOUI, MOHAMED

ART UNIT

PAPER NUMBER

2857

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/570,152	Applicant(s) HOSHI ET AL.	
	Examiner MOHAMED CHARIOUI	Art Unit 2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5 and 7-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5 is/are allowed.
- 6) ☒ Claim(s) 7-17 and 19-23 is/are rejected.
- 7) ☒ Claim(s) 18 and 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. Applicant cancelled claims 1-4 and 6.

DETAILED ACTION

Claim Rejections - 35 USC § 103

2. **Claims 7, 9-19 and 21-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Minami (U.S. Patent Number 6,985,804) in view of Ferguson et al. (U.S. Pub. Number (2003/0114966)).

As per claims 7 and 19, Minami teaches a detecting means for measuring a fuel consumption ratio of the construction machine (see col. 3, lines 15-28 and col. 3, line 35 to col. 4, line 25), an indicating means for providing a first indication for communicating a difference between the measured fuel consumption ratio and a set fuel consumption ratio (see col. 3, lines 4-14 and col. 17, lines 33-54).

Minami fails to teach that fuel consumption ratio being the fuel consumption per work done.

Ferguson et al. teach monitoring machine data that include fuel consumed and total hours of operation (see paragraphs [0024]; [0016]; and [0019]). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Ferguson et al.'s teaching into Minami's invention because it would determine the fuel consumption per the total hours of operation during the work done. Therefore, accurate calculations of the fuel economy of the work machine would be determined and appropriate actions would be taken to minimize the work machine fuel consumptions.

As per claims 17 and 23, Minami teaches measurement means for measuring a fuel consumption ratio (see col. 3, lines 4-14); storage means for storing a plurality of reference fuel consumption ratios which are set in advance, corresponding to different work loads (see col. 3, lines 4-14 and col. 3, line 64 to col. 4, line 25); selection means for selecting the reference fuel consumption ratio which corresponds to the work load from the storage means (see col. 4, lines 15-25); comparison means for comparing the fuel consumption ratio measured by the measurement means and the reference fuel consumption ratio selected by the selection means (see col. 11, line 65 to col. 12, line 9 and col. 8, lines 21-40); and output means for outputting the result of comparison by the comparison means (see col. 9, lines 40-49).

Minami fails to teach that fuel consumption ratio being the fuel consumption per work done.

Ferguson et al. teach monitoring machine data that include fuel consumed and total hours of operation (see paragraphs [0024]; [0016]; and [0019]). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Ferguson et al.'s teaching into Minami's invention because it would determine the fuel consumption per the total hours of operation during the work done. Therefore, accurate calculations of the fuel economy of the work machine would be determined and appropriate actions would be taken to minimize the work machine fuel consumptions.

As per claims 9 and 21, Minami further teaches that when the measured fuel consumption ratio is larger than the set fuel consumption ratio, the indicating

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means provides a second indication for prompting an improvement of fuel consumption (see col. 8, lines 21-40 and col. 1, lines 32-55).

As per claim 10, Minami further teaches that the second indication for prompting the improvement of fuel consumption includes a display displayed on a monitor screen which is provided in an operator cab of the construction machine (see col. 10, line 64 to col. 11, line 19).

As per claims 11 and 12, Minami further teaches that the second indication for prompting the improvement of fuel consumption includes a voice presentation by a voice generator which is provided in an operator cab of the construction machine (see col. 10, line 64 to col. 11, line 19).

3. **Claims 8, 13-16 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Minami in view of Ferguson et al. and Yoshimatsu (U.S. Patent Number 6,851,207).

As per claims 8 and 20, Minami in view of Ferguson et al. teach the system as stated above except that the construction machine includes a traveling unit and a working machine mounted on the traveling unit.

Yoshimatsu discloses a construction machine includes a traveling unit and a working machine mounted on the traveling unit (see Fig. 1 and col. 4, lines 8-28). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Yoshimatsu's teaching into Minami in view of Ferguson et al.'s teaching because it would provide a lower traveling body over the top of which the working machine is mounted so that the entire system

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can be moved. Therefore, the working machine would be able to reach the location where work needs to be performed.

Minami fails to teach that fuel consumption ratio being the fuel consumption per work done.

Ferguson et al. teach monitoring machine data that include fuel consumed and total hours of operation (see paragraphs [0024]; [0016]; and [0019]). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Ferguson et al.'s teaching into Minami's invention because it would determine the fuel consumption per the total hours of operation during the work done. Therefore, accurate calculations of the fuel economy of the work machine would be determined and appropriate actions would be taken to minimize the work machine fuel consumptions.

As per claims 13 and 22, Minami further teaches that when the measured fuel consumption ratio is larger than the set fuel consumption ratio, the indicating means provides a second indication for prompting an improvement of fuel consumption (see col. 8, lines 21-40 and col. 1, lines 32-55).

As per claim 14, Minami further teaches that the second indication for prompting the improvement of fuel consumption includes a display displayed on a monitor screen which is provided in an operator cab of the construction machine (see col. 10, line 64 to col. 11, line 19).

As per claims 15 and 16, Minami further teaches that the second indication for prompting the improvement of fuel consumption includes a voice

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presentation by a voice generator which is provided in an operator cab of the construction machine (see col. 10, line 64 to col. 11, line 19).

Allowable Subject Matter

4. **Claims 18 and 24** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 18 and 24 are objected to because the closest prior art, Dong et al., Ferguson et al. and Yoshimatsu fail to anticipate or render obvious a construction machine comprising control means which has a plurality of selective work modes having respectively different reference load values, for controlling an operation of the construction machine so that the work load thereof matches the reference load value corresponding to the selected work mode, in combination with the rest of the claim limitations as claimed and defined by the Applicant.

5. **Claim 5** are allowed because the closest prior art, Dong et al., Ferguson et al. and Yoshimatsu fail to anticipate or render obvious a construction machine comprising control means which has a plurality of selective work modes having respectively different reference load values, and controls an operation of the construction machine so that the work load thereof matches the reference load value corresponding to the selected work mode, in combination with the rest of the claim limitations as claimed and defined by the Applicant.

Response to Arguments

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6. Applicant's arguments with respect to claims 7-24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Prior art

8. The prior art made record and not relied upon is considered pertinent to applicant's disclosure:

Kinugawa ['406] discloses management system for construction machines.

Tamaru ['986] discloses display device for work machine.

Contact information

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohamed Charioui whose telephone number is (571) 272-2213. The examiner can normally be reached Monday through Friday, from 9 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on (571) 272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mohamed Charioui

3/10/08

/Edward Raymond/

Primary Examiner, Art Unit 2857

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